

**REPORT ON BIRTH DEFECT INVESTIGATIONS CONDUCTED BY THE
TEXAS BIRTH DEFECTS MONITORING DIVISION AND THE HEALTH STUDIES PROGRAM,
TEXAS DEPARTMENT OF HEALTH**

1994

Notes: A glossary of birth defects and other terms is found at the end of this document.

TDH = Texas Department of Health

SAN ANTONIO (Bexar Co.)

Conditions of Concern: *Gastroschisis.*

Background: A nurse reported several cases of gastroschisis from a private practice. She was concerned that this represented an unusually high number.

Response: TDH provided information on usual gastroschisis rates and risk factors to the nurse. No further action required at this time.

Duration of Investigation: January - February.
4 person-hours.

**PARKLAND MEMORIAL HOSPITAL, DALLAS
(Dallas Co.)**

Conditions of Concern: *Anencephaly, renal agenesis, hypoplastic left heart, trisomies.*

Background: A Parkland neonatologist reported an apparent excess of birth defects among Hispanic patients and requested assistance in investigating.

Response: Using state vital statistics data and information from the California Birth Defects Registry, TDH was able to determine that occurrence of anencephaly at Parkland was not statistically different from other public hospitals. Also, Hispanic patients were not at statistically significant higher risk of having infants with anencephaly than were other patients at Parkland. The other three defects of concern were not examined thoroughly, because of low frequency and/or poor ascertainment from birth or death records. No further action required at this time. Referred to Dallas County epidemiologist for follow-up if needed.

Duration of Investigation: January - July. 78 person-hours.

EL PASO (El Paso Co.)

Conditions of Concern: *Gastroschisis.*

Background: El Paso City/County Health Department reported 12 gastroschisis cases for the period October 1992 through October 1993. Based on CDC data, 3-4 cases would have been expected. The El Paso Health Department requested TDH assistance.

Response: The local health department is taking the lead. TDH was able to provide information based on state vital statistics data and offer assistance with study design, questionnaire, etc. El Paso City/County Health Department will contact TDH if they want further assistance.

Duration of Investigation: January - September. 86 person-hours.

BRYAN (Brazos Co.)

Condition of Concern: *All birth defects.*

Background: Citizens and health care providers reported concerns about a "cluster" of birth defects in the neighborhoods surrounding the Atochem facility. Atochem was a facility which formulated pesticides. Arsenic contamination has been detected in the area surrounding the facility.

Response: Information regarding arsenic and birth defects has been provided to citizens and health care providers in the area. One meeting was held with local physicians to discuss the feasibility of implementing an informal surveillance system. Area physicians have also been surveyed to determine their willingness to participate in a surveillance effort. Vital statistics data for the area are currently being collected and analyzed. This investigation is ongoing.

Duration of Investigation: January - December.
130 person-hours.

TEMPLE (Bell Co.)

Condition of Concern: *Gastroschisis.*

Background: Scott & White Hospital in Temple reported an apparent excess number of gastroschisis cases (7) for the first part of 1994. TDH was requested to assist in an investigation.

Response: TDH conducted a survey of 12 area hospitals in the surrounding counties to determine the number of additional gastroschisis cases. Case medical records were reviewed and state vital statistics analyzed. The investigation is ongoing.

Duration of Investigation: March - December. 93 person-hours.

SAN ANTONIO (Bexar Co.)

Condition of Concern: *Anophthalmia.*

Background: A father claimed to have been exposed to chemical agents in the Gulf War. He asked if we knew of similar cases, and whether the registry will include information on occupation in the military.

Response: TDH called the Congressional Committee on Veteran Affairs to obtain background information, and contacted the citizen's physician. Articles on the syndrome were sent to the citizen. No further action required at this time.

Duration of Investigation: July. 3 person-hours.

EL PASO (El Paso Co.)

Conditions of Concern: *Microphthalmia.*

Background: A student at UT El Paso (UTEP) delivered a child with microphthalmia, and learned of another birth soon after hers with the same condition. Of 6 other simultaneously pregnant students, 2 miscarried, 1 gave birth to a child with birth defects. There was concern of some hazard in UTEP buildings.

Response: At the request of the El Paso City/County Health Department, the mother was contacted and interviewed regarding her child and the other affected pregnancies. Information on microphthalmia was provided. Updates were provided to El Paso City/County Health Department. No further action required at this time.

Duration of Investigation: August. 6 person-hours.

ALICE, FREER, SAN DIEGO (Jim Wells, Duval Counties)

Conditions of Concern: *Infant mortality.*

Background: The office of Congressman Frank

Tejeda requested an investigation into reports of recent high infant death rates in the towns of Alice, Freer, and San Diego. Congressman Tejeda's office had originally been contacted by a citizen who had noticed an unusually large number of infant obituaries in the local newspapers.

Response: TDH analyzed vital statistics data for the two previous years, comparing town and county data with the entire state of Texas. Results showed that while infant mortality in the two counties was lower than expected from Texas rates, and infant mortality in the three towns was higher, those differences were not statistically significant (could not be distinguished from random variation). No further action required at this time.

Duration of Investigation: August - September. 32 person-hours.

GRANBURY (Hood Co.)

Condition of Concern: *Down Syndrome.*

Background: TDH received a call from the Texas Mental Health and Mental Retardation Department of an apparent excess number of Down Syndrome cases from Granbury. Seven cases were observed, born from 1992 - December 1994. Based on the California rate, 0.49 cases were expected.

Response: TDH conducted an investigation to (a) confirm reported cases and (b) ascertain unreported cases for the town and county. Five cases were confirmed, born to mothers resident in Granbury. This was 10.2 times the expected number, and was statistically significant. Further investigation is being planned.

Duration of Investigation: September - December. 37 person-hours.

DALLAS (Dallas Co.)

Conditions of Concern: *Polydactyly.*

Background: A midwife delivered two infants with identical anomalies (an extra digit on hands and feet), within seven months, whose parents lived one block from each other. She was concerned that this was unusual.

Response: Information concerning polydactyly was discussed with her. The vast majority of syndromes have a genetic basis, and one father had the condition. It was agreed that there was probably no problem, but that she would report further concerns if they arose. No further action required at this time.

Duration of Investigation: October. 5 person-hours.

MCKINNEY (Collin Co.)

Condition of Concern: *Birth defects related to the ear, specifically atresia of the ear.*

Background: TDH received a call from a citizen in McKinney, of an apparent excess number of cases of children with ear defects. Six cases were mentioned, born from 1991-October 1994. Based on the rates from California, the expected number of cases in that time period would have been 0.79.

Response: An investigation was conducted to (a) confirm reported cases, (b) ascertain unreported cases for the town. Three cases were confirmed. This was barely statistically significant, the three diagnoses were not the same, and no cases have been born in the past two years. No further action required at this time.

Duration of Investigation: November - December. 44 person-hours.

GLOSSARY

Anencephaly:	congenital absence of the cranial vault, with cerebral hemispheres completely missing or reduced to small masses attached to the base of the skull.
Anophthalmia:	a developmental defect characterized by complete absence of the eyes or by the presence of vestigial eyes.
Atresia:	imperforation; absence or closure of a normal opening.
Down Syndrome:	a condition characterized by a small, anteroposteriorly flattened skull, short, flat-bridged nose, epicanthal fold, short phalanges, with moderate to severe mental retardation. Due to an extra chromosome 21; one type of trisomy.
Gastroschisis:	a congenital fissure of the abdominal wall, usually accompanied by protrusion of the small and part of the large intestine.
Hypoplastic Left Heart:	incomplete development of the left side of the heart.
Infant Mortality:	death before one year of age.
Microphthalmia:	abnormal smallness of the eyes.
Person-hour:	the equivalent of one person working for one hour; thus 3 person-hours can be derived from 3 people working 1 hour each, or 1 person working 3 hours, or any other combination.
Polydactyly:	having extra digits (fingers or toes).
Renal agenesis:	absence of the kidneys.
Trisomies:	having three copies of one chromosome instead of the usual two.